James N Blowers

From: Michael H Foley
Sent: Monday, February 13, 2012 3:22 PM
To: James N Blowers
Subject: Re: Material for cavity fabrication at Research Instruments (RI)

Hi Jamie,

Those disks will be used for forming beam tubes, where the fields will be low. No formal inspection is necessary.

Mike

On Feb 13, 2012, at 3:01 PM, Jamie Blowers wrote:

Mike, John Z reminded me that there were two sheets released last week from this batch. I assume they are the ones currently being wire EDM'd in the shop to make eight ~10.5" disks. Do you want any formal inspection done to those eight disks?

Jamie

-------- Original Message --------
Subject: Re: Material for cavity fabrication at Research Instruments (RI)
From: Jamie Blowers <blowers@fnal.gov>
To: Sherry F. Baketz <sbaketz@fnal.gov>
Date: 2/13/2012 2:37 PM

Sherry, thanks for changes to the traveler. From my point of view, the only thing I would change is to add a field for recording the "Heat treatment batch number" (step 4.3.2 of the handling spec), in step 1.4 of the traveler. I think the rest looks good.

Earlier this afternoon Mike Foley sent the serialization scheme for these sheets:

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RI-650B2-xxx

RI is for Research Instruments
650 is for 650 MHz
B2 is for batch 2 of the 650 MHz niobium
xxx = sequential number for each plate (e.g., the 30 sheets you will receive should be
labeled 001 - 030)
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So after Lance has given it his blessing, we can issue thirty travelers for Rob to use. I spoke with Rob, and he is now ready for receiving the sheets and the travelers. I will touch base with the IB4 folks to have the sheets sent to the new lab in ICB where Rob will do the work.

Jamie

-------- Original Message --------
Subject: Re: Material for cavity fabrication at Research Instruments (RI)
From: Sherry F. Baketz <sbaketz@fnal.gov>
To: Lance Cooley <ldcooley@fnal.gov>
Date: 2/13/2012 2:19 PM

Lance,

Please review the 464033 Rev A traveler using the following link. Let me know if you require any additional changes. Upon your approval, I will publish the traveler.

https://vector-onsite.fnal.gov/Tools/TravelerWriter/TravelerWriterPreviewDocument.asp?qsSpecificationID=1375&qsRevisionID=3

We have not yet received the serial numbers you would like the traveler issued for.

Adam will be working with you on completing the OP revision. Please include Adam Bracero in any communication regarding the OP.

Thanks,
Sherry

From: Lance Cooley [mailto:ldcooley@fnal.gov]
Sent: Monday, February 13, 2012 12:34 PM
To: James N Blowers
Cc: Robert G Schuessler; Jan Szal; Michael H Foley; John R Zweibohmer; Homer Cunningham; Charles J Grimm; Camille Ginsburg; Sherry F. Baketz; Leonardo Ristori
Subject: Re: Material for cavity fabrication at Research Instruments (RI)

Gents (and Lady), --

Jamie - it's in your court still. We're on step 4.3.2 - logging the information. You need to initiate the travelers. Then, you are supposed to deliver them to Rob at step 4.3.4.

Rob - You got the rev A of the inspection procedure on 2/3/12. For the water test --- some sheets cannot be stood vertically. At this time, I did not want to proscribe how the sheets should dry, just that they should air dry for 30 minutes (or more if needed).

Mike - I need your review of the rev A of 464049. We can proceed under Rev0 anyway.

Lance

On 2/9/2012 2:06 PM, Jamie Blowers wrote:
Rob, I believe the proverbial ball is in your court. I don't see travelers issued yet, so I assume that the serial numbers have not been communicated from you to Jan or Sherry. I also assume that means the sheets have not yet been asked for. Do you have a sense of when this will happen?

Thanks,

Jamie

-------- Original Message --------

Subject: Re: Material for cavity fabrication at Research Instruments (RI)
From: Jamie Blowers <blowers@fnal.gov>
To: Jan Szal <jszal@fnal.gov>
Date: 2/3/2012 11:21 AM

Good point. I believe it makes sense to provide a reference to the spec from both travelers.

Jamie

-------- Original Message --------
Subject: Re: Material for cavity fabrication at Research Instruments (RI)
From: Jan Szal <jszal@fnal.gov>
To: James N Blowers <blowers@fnal.gov>, Lance Cooley <ldcooley@fnal.gov>
Date: 2/3/2012 11:05 AM

Should we also revise the 333869 - 1.3 GHz Niobium Sheet Inspection Traveler ? I don't see any references to the OP – 464049 in neither traveler.

Jan Szal
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Tel. (630) 840-4572
Fax (630) 840-8079
jszal@fnal.gov

From: James N Blowers
Sent: Friday, February 03, 2012 10:47 AM
To: Lance Cooley
Cc: Jan Szal; Michael H Foley; John R Zweibohmer; Homer Cunningham; Robert G Schuessler; Charles J Grimm; Camille Ginsburg; Sherry F. Baketz; Leonardo Ristori
Subject: Re: Material for cavity fabrication at Research Instruments (RI)

It looks like our emails were almost crossing paths. Thanks for the updated spec. I think the proposed changes look good. Regarding the scope, if the only aspect of the inspection that is limited by dimensions is the ECS, and we're adding the option of the water soak test (which is more likely to be used on larger sheets), then it seems to me that the scope can be revised to say " The scope excludes tubes, curved pieces, thick plates, and other pieces with mass greater than 5 kg."

Jamie

-------- Original Message --------
Subject: Re: Material for cavity fabrication at Research Instruments (RI)
From: Lance Cooley <ldcooley@fnal.gov>
To: Jan Szal <jszal@fnal.gov>
Date: 2/3/2012 10:38 AM

Thanks Jan --- you echo a conversation I have had with Leonardo Ristori recently.

In response to you and to Leonardo, I attach a draft revision of 464049. Please note that the scope has not been revised - the scope limits the OP to sheets 60 cm or less in any dimension and mass less than 5 kg. I would like to hear comments whether this scope can be removed for very large sheets with the revised procedure.

Yes, a modification to the traveler will be needed to accommodate comments resulting from the water test. Please also take note of the revised 4.4.6.

Cheers

Lance

On 2/3/2012 9:08 AM, Jan Szal wrote:
Should the procedure TD-5220-OP-464049 step 4.4.7 be revised to include: "*Soak the sheet in filtered tap water (or distilled, de-ionized, or ultrapure water) for 10 min followed by air drying for 30 minutes to inspect for rust stains.*"? Also, is there anything you want to add or delete from 464033 - 650 MHz Niobium Sheet Inspection Traveler ?

Rob could you send us the serial numbers?

Jan Szal
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Fax (630) 840-8079
jszal@fnal.gov

From: Lance Cooley [mailto:ldcooley@fnal.gov]
Sent: Friday, February 03, 2012 8:53 AM
To: James N Blowers
Cc: Michael H Foley; John R Zweibohmer; Homer Cunningham; Jan Szal; Robert G Schuessler; Charles J Grimm; Camille Ginsburg; Sherry F. Baketz
Subject: Re: Material for cavity fabrication at Research Instruments (RI)

Camille was advised about the need to cut sheets before ECS, and gave an initial opinion of NO, which means the established plan is as we have discussed -- substitution of soaking for ECS.

Lance

On 2/3/2012 7:32 AM, Jamie Blowers wrote:
I haven't heard any other feedback, so I assume that others are good with the identified tasks. This means that the proverbial ball is in Mike's and Lance's court to determine if ECS is to be done, and after we know that then the rest can be set into motion. Until then we are on hold.

Jamie

-------- Original Message --------
Subject: Re: Material for cavity fabrication at Research Instruments (RI)
From: John R Zweibohmer <johnz@fnal.gov>
To: James N Blowers <blowers@fnal.gov>, Lance Cooley <ldcooley@fnal.gov>, Michael H Foley <foleymh@fnal.gov>, Homer Cunningham <homerc@fnal.gov>, Jan Szal <jszal@fnal.gov>, Robert G Schuessler <bschuess@fnal.gov>
Date: 1/30/2012 4:25 PM

6. John Z needs to get an MMR ready to ship the material to RI. Rob/Homer, please advise when the shipment is ready to go.

How many sheets do we need to send to RI Mike? Any other materials that need to be sent? We also need to supply AES with the material for two 5-cell 650 MHz cavities when it's prudent.

From: James N Blowers
Sent: Monday, January 30, 2012 3:14 PM
To: Lance Cooley; Michael H Foley; Homer Cunningham; Jan Szal; Robert G Schuessler
Cc: Charles J Grimm; Camille Ginsburg; John R Zweibohmer; Sherry F. Baketz
Subject: Re: Material for cavity fabrication at Research Instruments (RI)

For those who haven't yet been involved in this, we have 30 21"x21" niobium sheets in IB4 which will need to be inspected (and the results documented) in the near future so they can be sent to RI for fabrication into 650 MHz single-cell cavities (PO 602615). The inspection will be done according to OP-464049 and recorded in traveler TR-464033. It is my understanding that the inspection work will be done by Rob Schuessler.

Here is a summary of what I believe needs to take place [brackets indicate who I think is responsible]:

1. We need to understand whether or not some or all of the 30 sheets will be eddy current scanned [Mike and Lance].
    - depending on this outcome we may need to revise the traveler before we issue them, since the present version does NOT contain a spot for doing an ECS.
2. We need to get the sheets to Rob [Homer and Rob should work out the logistics].
3. We need to issue the appropriate travelers, which means we need to know serial numbers first [Rob to communicate with Jan on serial numbers, Jan to get travelers issued].
4. Inspection to be performed and documented in the travelers [Rob].
5. Sheets need to be sent back to IB4 and prepped for shipment to RI [Rob and Homer to work out logistics].

What have I missed or otherwise gotten wrong?

Jamie

-------- Original Message --------
Subject: Re: Material for cavity fabrication at Research Instruments (RI)
From: Lance Cooley <ldcooley@fnal.gov>
To: Michael H Foley <foleymh@fnal.gov>, James N Blowers <blowers@fnal.gov>
Date: 1/26/2012 3:57 PM

Colleagues - TD-5220-OP-464049

Leonardo and I just discussed this procedure. Eddy-current scanning cannot be done with the corners on these sheets using our equipment. So, please substitute the following for 4.4.7: Soak the sheet in filtered tap water (or distilled, de-ionized, or ultrapure water) for 10 min followed by air drying for 30 minutes to inspect for rust stains.

Please also notice that 4.4.6 discusses visual inspection of the sheet. Not only do we want any visible defect to be called out, we also want those defects that are serious (as described in the procedure) to be rigorously documented, since these may cause rejection of the sheet.

Mike and Jamie -- you will need to identify a sheet number scheme per 4.4.3. Maybe this continues the ACCEL-FE sequence used previously.

Lance

On 1/26/2012 2:26 PM, Michael H Foley wrote:

Hi Jamie,

We have received a partial order of material (niobium and Nb55Ti) from Wah Chang that we will be required to ship to RI in the near future. The remainder of that material will be arriving at Fermilab shortly. RI will use the material to fabricate six 650 MHz SRF cavities for Fermilab.

Of immediate concern are 30 21" x 21" x 0.160" RRR300 niobium plates that are used to form half-cells for the cavities. The plates are currently in IB4. It is urgent that those plates be inspected according to the procedures outlined in the document prepared by Lance Cooley titled; "Sequence of Procedures for Handling, Inspecting, Recording and Shipping SRF Niobium Sheets".

Thanks.

Mike

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